

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	John L. White)	Examiner:	Truong, Thanh K
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Serial No.:	10/667,176)	Art Unit:	3721
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Filed:	09/17/2003)	Attorneys Ref.:	P214414
)		
Title:	Preloaded Drop Hammer For Driving Piles)		
)		

**REQUEST FOR CONTINUED EXAMINATION
AND SUBMISSION UNDER 37 CFR 1.114**

Mail Stop RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This Request for Continued Examination (RCE) follows the final Office Action mailed June 9, 2009. A two-month Extension of Time is hereby respectfully requested making this response due November 9, 2009. The small entity \$245 extension fee and \$405 RCE fee are paid concurrently herewith. It is believed that no further fee or charge is due at this time to maintain the application in full force and effect. However, if any such fee or charge is due, please charge this to Deposit Account No. 502099.

This Submission is filed with a Request for Continued Examination following receipt by the applicant of a final Office Action mailed June 9, 2009. In that Office Action, the Examiner rejected claims 1, 4, 6, 8, 9, 12, 13, 18, and 21 under 35 USC §103(a) as being unpatentable over U.S. Pat. No. 4,421,180 to Fleishman et al. in view of U.S. Pat. Nos. 6,102,133 to Scheid et al. and 3,789,930 to Nishimura et al. The Applicant hereby amends the application in a manner that distinguishes the present invention from the cited combination; the Applicant thus respectfully requests withdrawal of the rejection under 35 USC § 103(a) on the basis that the cited

combination fails to disclose, teach, or suggest the present invention as recited in amended claims 1, 13, and 18.

As amended, claims 1, 13, and 18 specify that the ram member free falls above the preload position and does not free fall below the preload position. The Applicant respectfully submits that the cited Fleishman and Scheid references are not properly combinable as suggested by the Examiner and, in any event, this combination does not disclose, teach, or suggest the present invention recited in amended claims 1, 13, and 18.

The Fleishman reference specifically states at column 1, lines 7 and 8, that "the present invention relates to ... a drop hammer assembly..." and at column 1, lines 18-21, that "drop hammers ... derive their impact energy solely by hoisting a weight and then permitting it to fall freely under the influence of gravity to impact the pile being driven." The amendments to claims 1, 13, and 18 clarify that the ram member free falls above the preload position but does not free fall when the ram member is below the preload position.

The Fleishman reference notes at column 1, lines 21-23, that "[d]rop hammers are quite noisy and this noise problem has caused there use to be prohibited in some areas." To solve the problem with noise, the Fleishman et al. reference discloses "the provision of a slightly cushioning but substantially quieting junction between a pile driver and a pile being driven" (col. 1, line 68, through column 2, line 2; column 2, lines 27-31; claims 2 and 7). To the extent that the Fleishman reference acknowledges the problem with noise associated with drop hammer assemblies, the Fleishman reference purports to solve that problem by providing cushioning means between the ram and the pile.

The Examiner argues that one of ordinary skill in the art would be motivated to combine the Fleishman reference with the Scheid reference. For the following reasons, the Applicant respectfully disagrees.

Initially, the Scheid reference clearly relates to what is referred to in the industry as a diesel hammer. One of ordinary skill in the art would recognize that a diesel hammer as recited in Scheid is fundamentally different from a drop hammer such as that described in the Fleishman reference. The Fleishman reference itself clearly distinguishes the drop hammer disclosed therein from "[p]ile drivers or pile hammers ...

frequently powered by means of compressed air, steam or diesel fuel within a self-contained cylinder" (col. 1, lines 10-12). At column 1, lines 23-27, the Fleishman reference states that "[t]he other hammer types discussed above also create considerable noise and ... exceed permissible noise levels." The Fleishman reference itself thus teaches one of ordinary skill in the art away from "other hammer types," including those "powered by means of ... diesel fuel within a self-contained chamber."

The Examiner quoted column 7, lines 17-20, of the Scheid reference to support the conclusion that "[o]ne in the art would recognize that in order to reduce the noise, one would be required reduce (sic) the mechanical impact between the ram and the anvil, and furthermore, the compressed air in an airtight chamber would soften the impact between the ram and the anvil".

However, the Applicant respectfully submits that the quote from column 7, lines 17-20, of the Scheid reference cited by the Examiner omits text from the Scheid reference that changes the meaning of that quote. Reproduced below is the text from the Scheid reference quoted by the Examiner but including the text on column 7, lines 20-22, omitted by the Examiner (in bold):

Upon further upward movement the hammering piston 26 will take in fresh air through the working slot 36, and upon the hammering piston falling down the air contained in the cylinder will be compressed once the hampering piston 26 has moved past the working slot 36 in downward direction. **The hammering piston will then actuate the fuel injection unit 38 and the cycle described above will start again.**

In short, this section of the Scheid reference discloses operation of the device as a conventional diesel hammer, referred to as "harsh Diesel pile-driving" in that reference. The Applicant respectfully submits that, for the Examiner to conclude that compression of air immediately prior to injection of fuel will "reduce the noise", "reduce the mechanical impact", and "soften the impact between the ram and the anvil" based on this quote represents a significant misreading of this quote. By actuating the fuel injection unit, the Scheid reference teaches that fuel will be ignited during the compression cycle, resulting in an explosion that will be loud and which will significantly increase the forces acting on the ram and the anvil.

The Scheid reference describes, on column 6, line 15, through column 7, the "pressure air operating mode" of the device disclosed therein. That discussion concludes with a description of the falling of the piston as follows:

After the hammering piston 26 has fallen onto the hammering member 12 and has moved the latter and an object to be piled and contacting the hammering member in a downward direction, the operating cycle described above will start again.

The Applicant respectfully submits that nothing in the description of the "pressure air operating mode" discloses, teaches, or suggests that air be compressed prior to contact between the hammering member and the helmet member. To emphasize that the compressed air prevents free-falling of the ram member, the Applicant has thus amended the independent claims to emphasize that the ram member does not free fall when the ram member is below the preload position. The Applicant thus respectfully submits that the cited references, taken alone or in combination, fail to disclose, teach, or suggest the drop hammers of claims 1 and 18 or the method of claim 13.

In addition, the Applicant respectfully submits that the Examiner overstates the role of noise reduction as a motivating factor for combining the Scheid, Fleischman et al., and Nishimura references. The Applicant developed the present invention to prevent problems with tension cracking in the pile being driven by a drop hammer. The Applicant respectfully submits that Examiner has not established that the cited references, taken alone or in combination, recognize or even attempt to solve problems associated with tension cracking or even that tension cracking and reduced noise are related. The Applicant respectfully submits that, without this motivation, one of ordinary skill in the art would not combine the references as suggested by the Examiner. The Applicant thus respectfully submits that the cited combination is improper, and withdrawal of the rejections based on this combination is respectfully requested.

Submitted herewith is a PDF document entitled P214414_2009_11_09_ClaimsSC containing a marked up version of the claims illustrating the amendments to the claims submitted by this Response. The document submitted herewith contains the text of each pending claim, along with any

amendments made hereby (illustrated using strikethrough and underlining) and the status of each pending claim.

Given the foregoing, the Applicant respectfully submits that claims 1, 4, 6, 8, 9, 12, 13, 18, and 21 are in condition for allowance, and such allowance is respectfully requested. If there is any matter which could be expedited by consultation with the Applicant's attorney, such would be welcome. The Applicant's attorney can normally be reached at the telephone number below.

Signed at Bellingham, County of Whatcom, State of Washington this 9th day of November, 2009.

Respectfully submitted,

John L. White

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